

ROCKY FLATS ENVIRONMENTAL
TECHNOLOGY SITE

EMD OPERATING PROCEDURES
MANUAL VOL. VI: AIR

Manual No.:

Procedure No.:

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5-21000-OPS-AP

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Environmental Management

THIS IS ONE VOLUME OF A SIX VOLUME SET WHICH INCLUDES:

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<u>Procedure No.</u>	<u>Title</u>	<u>Rev. No.</u>	<u>Effective Date</u>
AP.01	4-C97-ENV-AQ.01 Effluent Tritium Sample Collection	0*	03/18/94
* This document is a complete revision of document 5-21000-OPS-AP.01,R0.			
AP.02	4-C98-ENV-AQ.02 Tritium Sampler Calibration	0*	03/18/94
* This document is a complete revision of document 5-21000-OPS-AP.02,R0.			
•94-DMR-001850	New Calibration Rotometer	0	09/28/94
AP.03	4-C83-ENV-AQ.03 Effluent Air Radioparticulate Sample Collection	0*	06/01/94
*This document is a complete revision of document 5-21000-OPS-AP.03,R0.			
•94-DMR-001845	Effluent Travelers & COC Sheets Collection	0	09/27/94
AP.04	4-C82-ENV-AQ.04 Effluent Air Radioparticulate Sampler Calibration	0*	06/01/94
* This document is a complete revision of document 5-21000-OPS-AP.04,R0.			
AP.06	Effluent Air Pilot Tube Inspection and Replacement		
AP.08	Volumetric TSP/PM ₁₀ Calibration , Ambient Air Particulate Sampling High Volume Method	0	10/01/91

DOCUMENT CLASSIFICATION REVIEW NUMBER
FOR R.O. POTENTIAL CLASSIFICATION OFFICE
JUNE 11, 1991

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AP.09	Ambient TSP/PM ₁₀ Air Particulate Sampling High Volume Method	0	10/01/91
AP.10	Radioactive Ambient Air Monitoring Particulate Sampling Data Reduction	0	10/01/91
AP.11	Mass Flow TSP/PM ₁₀ Calibration, Ambient Air Particulate Sampling High Volume Method	0	10/01/91
•AQ.11	4-D21-ENV-AQ.11 Air Emissions Reporting and Permitting for New and Existing Sources	0	07/06/93

This procedure will be replacing AP.11. The procedure, AP.11, will be combined with the procedure, AP.08, be renamed AQ.08, and be placed inside this manual. **This document, AQ.11, was issued with a limited distribution list.** It can be requested as a stand-alone, or as part of the entire manual.

AP.12	Placement, Design, Installation, and Operation of Meteorological Monitoring Stations		
AP.13	Radioactive Ambient Air Monitoring Program	0	10/01/91
AP.14	Meteorology Data Downloading		
AP.15	Restoration Projects Data Reduction for Radioactive Ambient Air Monitoring	0	10/01/91
AP.16	4-D31-ENV-AQ.16 Restoration Projects Ambient Air Particulate Sampling (High Volume Method)	0*	05/26/94

*This document is a complete revision of 5-21000-OPS-AP.16,R0.

AP.17	Sampling Procedure, Volatile Organic Compounds Method TO-14	0	10/01/91
AP.18	Sampling For Organochlorine Pesticides and Polychlorinated Biphenyls in Ambient Air (SVOD)	0	10/01/91

DOCUMENT MODIFICATION REQUEST (DMR)

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Refer to 1-A01-PPG-001 for Processing Instructions.
Print or Type All Information (Except Signatures).

1. Date 09/02/94			25. DMR No. 94-DMR-00850		
2. Existing Document Number/Revision 4-C98-ENV-AQ.02			3. New Document Number or Document Number if it is to be changed with this Revision N/A		
4. Originator's Name/Phone/Pager/Location L. C. Pauley/3943/3838/030			5. Document Title Effluent Air Tritium Sampler Calibration		
6. Document Type <input checked="" type="checkbox"/> Procedure <input type="checkbox"/> Other			7. Document Modification Type (Check only one) <input type="checkbox"/> New <input checked="" type="checkbox"/> Revision <input type="checkbox"/> Intent Change <input checked="" type="checkbox"/> Nonintent Change <input type="checkbox"/> Editorial Correction <input type="checkbox"/> Cancellation		
8. Item	9. Page	10. Step	11. Proposed Modifications		
1	5	4.2.1	Change [1] to: Obtain a calibrated rotometer, 1.0 ± 0.05 lpm (5000 ± 50 cc/min.).		
2	6	4.2.3	Remove: Extra open-top screw caps to fit the sample holder; Epoxy glue: Sample bottle labels.		
3	7	[8]	Change to: Perform any minor adjustments and/or replace any deficient rubber seals.		
4	7	[9]	Change to: Document any adjustments/replacements performed in the Comments section of Appendix 2.		
12. Justification (Reason for Modification, EJO #, TP #, etc.) New calibration rotometer which allows for tighter calibration tolerance has been purchased. Replacement of open-top screw caps is a maintenance job that should be performed under IWCP.					
If modification is for a new procedure or a revision, list concurring disciplines in Block 13, and enter N/A in Blocks 14 and 15. If modification is for any type of change or a cancellation, organizations are listed in Block 13, then Concuror prints, and signs in Block 14, and dates in Block 15.					
13. Organization	14. Print, Sign (if applicable)				15. Date (if applicable)
SME	/S/ L.C. Pauley				9/30/94
PAR Dps	/S/ Jm. Wood				01/31/94
16. Originator's Supervisor (print/sign/date) R. C. Ninninger 9/6/94					
17. Assigned SME/Phone/Pager/Location L. C. Pauley 13943/3838/030		18. Cost Center 418	19. Charge Number 98660312	20. Requested Completion Date 9/23/94	21. Effective Date 9/28/94
22. Accelerated Review? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		23. ORC Review Not required! 9/22-94			
24. Responsible Manager (print/sign/date) R. C. Ninninger 9/28/94		9/6/94			

RF-47940 (5/93)

REVIEWED FOR CLASSIFICATION / WCM
BY: [Signature]
DATE: 9-28-94

DOCUMENT CLASSIFICATION REVIEW
PER R.D. HO, WCM, CLASSIFIED ON 07/12
JUNE 11, 2001

EFFLUENT AIR TRITIUM
SAMPLER CALIBRATION

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LIST OF EFFECTIVE PAGES

<u>Pages</u>	<u>Effective Date</u>	<u>Change Number</u>
1-4	05/09/94	
5-7	09/28/94	94-DMR-001850
8-15	05/09/94	

TOTAL NUMBER OF PAGES: 15

EFFLUENT AIR TRITIUM
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PAGE 5**4. PREREQUISITE ACTIONS****4.1 Planning and Coordination****RCT**

- [1] Ensure that the activity is scheduled on the Plan of the Day for each building.
- [2] Ensure that the Shift Manager for each building has authorized the performance of this procedure.
- [3] Ensure that personnel performing work described in this procedure have received required training, and have a current building indoctrination for every building in which the work will be performed.
- [4] Verify that a Radiation Work Permit (RWP) exists for all buildings on the tritium change route in accordance with Appendix 3.

4.2 Materials and Equipment**4.2.1 Measuring and Test Equipment (MT&E)****RCT**

- [1] Obtain a calibrated rotometer, 1.0 ± 0.05 lpm (5000 ± 50 cc/min.).
- [2] Verify that all M&TE is calibrated, and has a current calibration sticker.

4.2.2 Special Tools and Equipment**RCT**

- [1] Ensure that the following special tools and equipment are obtained:
 - Source-checked Ludlum 12-1A Count Rate Meter
 - Plastic tubing, approximately 2 ft, 1/4 in. diameter
 - Adjustable wrench
 - Screwdriver, medium-slotted

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4.2.3 Consumables

RCT

[1] Ensure that the following consumables are obtained:

- Chem wipes
- Black grease pencil
- Surgeon's gloves

- Rubber seals to fit the sample holder

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5. INSTRUCTIONS—SAMPLER CALIBRATION

RCT

- [1] Verify that all prerequisites in Section 4, Prerequisite Actions have been completed, and document on Appendix 1, Effluent Air Tritium Sampler Calibration Data Sheet.
- [2] Record the following information about the rotometer on Appendix 2, Tritium Calibration Worksheet:
 - Calibration due date
 - Identification number
 - Other pertinent information
- [3] Locate the effluent air tritium samplers in accordance with Appendix 3, Effluent Air Tritium Sampler Locations.

NOTE *The sampler flow rate meter is at the upper left side of the effluent air tritium sampler.*

- [4] Locate the effluent air tritium sampler flow rate meter.
- [5] **IF** the flow rate is **NOT** consistent with the current grease pencil mark, **THEN** record the as-found flow rate in the Comments section on Appendix 2.
- [6] Inspect the following for obvious deficiencies:
 - Tubing
 - Valving
 - Rubber seals
 - Open-top screw cap inserts
- [7] Record any deficiencies in the Comments section of Appendix 1.
- [8] Perform any minor adjustments or replace any deficient rubber seals.
- [9] Document any adjustments or replacements performed in the Comments section of Appendix 2.

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